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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,677	12/22/2000	Gregory P. Olsen	42390P9701	1644

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Paul A. Mendonsa
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN, LLP
12400 Wilshire Boulevard, 7th Floor
Los Angeles, CA 90025

EXAMINER

NGUYEN, THU HA T

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/746,677

Applicant(s)

OLSEN, GREGORY P.

Examiner

Thu Ha T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05/08/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims **1-18** are presented for examination.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 20, 2006 has been entered.

Claim Objections

3. Claims 1, 4, 7, 13, and 16 are objected to because of the following informalities:

4. Claim 1 recited the limitations "the response", and "the number". There is insufficient antecedent basis for these limitations in this claim. Appropriate correction is required.

5. Claims 4 and 7 recited the limitations "the target device" and "the response". There is insufficient antecedent basis for these limitations in this claim. Appropriate correction is required.

6. Claims 13 and 16 recited the limitation "the response". There is insufficient antecedent basis for these limitations in this claim. Appropriate correction is required.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 4-9, and 13-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter because of the following reasons:

9. Claims 4, 7, 13 and 16 are not limited to tangible embodiments. The claims recited "An article comprising a machine-accessible medium ..." is nonstatutory. Since claims 4 and 13 recited "An article ..." and claims 7 and 16 recited "An electronic data signal embodied in a data communications medium ..." are just limited to a "functional descriptive material" consists of data signal and computer programs per se, instead being defined as including tangible embodiments (e.g., a computer readable storage medium such as memory from a storage device, such as magnetic disk, a read-only memory (ROM) integrated circuit, CD-ROM...[page 10, paragraphs 25-26, of instant specification]) and intangible embodiments (e.g., other form of propagated signals (e.g., carrier waves, infrared signals, digital signals) [page 10, paragraph 26 of instant application]). As such, the claim is not limited to statutory subject matter and is therefore nonstatutory. See MPEP 2106 section V. DETERMINE WHETHER THE CLAIMED INVENTION COMPLIES WITH 35 U.S.C. 101 under subsection 1. Nonstatutory subject matter.

10. Likewise, claims 5-6, 8-9, 14-15 and 17-18 are dependent claims that depend on independent claims 4, 7, 13 and 16, thus claims 5-6, 8-9, 14-15 and 17-18

are also rejected under 35 U.S.C. 101.

11. Appropriate correction is required.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-18 are rejected under 35 U.S.C. § 103(a) as being anticipated by **Yuasa et al.** (hereinafter Yuasa) U.S. Patent No. **6,085,238**, in view of **Iwamura et al.**, (hereinafter Iwamura) U.S. Patent No. **6,396,814**.

14. As to claim 1, **Yuasa** teaches the invention as claimed, including a method comprising:

dividing a set of target devices into subsets of target devices, wherein a subset to which a particular device belongs is determined based on an identifier of the device and the number of subsets of target devices (abstract, figure 1, col. 8 lines 40-col. 10 lines 67, col. 17 lines 20-col. 18 lines 56, col. 45 lines 59-col. 48 lines 10); and

However, **Yuasa** does not explicitly teach the features of broadcasting a discovery request to network devices; estimating a number of network devices from the responses received from the network devices; sending a second message; limiting subsets of target devices responsive to the second request including the number of subsets to which the target devices are divided and a subset index value; and varying a timing with which the second request is communicated to the subset of target devices.

Iwamura teaches broadcasting a discovery request to network devices (figure 2, col. 13 lines 54-col. 15 lines 60);

estimating a number of network devices from the responses received from the network devices (figures 1, 4, 7, 67, step 332, col. 1 lines 37-col. 2 lines 11, col. 13 lines 54-col. 15 lines 15, col. 16 lines 63-col. 17 lines 29, col. 25 lines 6-50, col. 38, line 62-col. 39, line 42 –*the comparator section 14 counts the number of devices*);

sending a second message (figure 7, col. 1 lines 37-col. 2 lines 11); limiting subsets of target devices responsive to the second request including the number of subsets to which the target devices are divided and a subset index value (col. 13, line 63-col. 14, line 50, col. 16, line 62-col. 17, line 67); and

varying a timing with which the second request is communicated to the subset of target devices (col. 16, line 7-60, col. 18, line 44-col. 20, line 33)

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of **Yuasa** and **Iwamura** to includes the features of broadcasting discovery message, estimating number of network devices and varying timing with which the request is communicated to the subset of devices because

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it would provide the efficient system to reduce/eliminate the unnecessary retransmitted message and an efficient protocol execution is made possible (see Iwamura col. 16, lines 33-42).

15. As to claim 2, **Yuasa** does not explicitly teach the invention as claimed; however, **Iwamura** teaches wherein determining the subset of target devices comprises:

broadcasting over a network (figure 2, col. 13 lines 54-col. 15 lines 60);

receiving one or more responses to the network broadcast from target devices coupled to the network (figure 7, col. 1 lines 37-col. 2 lines 11);

estimating a number of devices coupled to the network (figures 1, 4, 7, col. 1 lines 37-col. 2 lines 11, col. 13 lines 54-col. 15 lines 15, col. 16 lines 63-col. 17 lines 29, col. 25 lines 6-50); and

determining a number of subgroups based, at least in part, on the estimated number of devices coupled to the network (figures 1, 4, 7, col. 1 lines 37-col. 2 lines 11, col. 6 lines 1-12, col. 13 lines 54-col. 15 lines 15, col. 16 lines 63-col. 17 lines 29, col. 25 lines 6-50). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Yuasa** and **Iwamura** to have the determining step of target devices by broadcasting the message, receiving one or more responses, estimating a number of devices and determining a number of subgroups because it would have an efficient communications system that improves

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and reduces the traffic volume by dividing group into smaller group or subgroup and using broadcast method to particular subgroup.

16. As to claim 3, **Yuasa** does not explicitly teach the invention as claimed; however, **Iwamura** teaches wherein determining the subset of target devices comprises:

multicasting to a subnet of a network (figure 2, col. 13 lines 54-col. 15 lines 60);
receiving one or more responses to from target devices of the subnet (figure 7, col. 1 lines 37-col. 2 lines 11);

estimating a number of devices in the subnet (figures 1, 4, 7, col. 1 lines 37-col. 2 lines 11, col. 13 lines 54-col. 15 lines 15, col. 16 lines 63-col. 17 lines 29, col. 25 lines 6-50); and

determining a number of subgroups based, at least in part, on the estimated number of devices in the subnet (figures 1, 4, 7, col. 1 lines 37-col. 2 lines 11, col. 13 lines 54-col. 15 lines 15, col. 16 lines 63-col. 17 lines 29, col. 25 lines 6-50). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to combine the teachings of **Yuasa and Iwamura** to have the determining step of target devices by multicasting the message, receiving one or more responses, estimating a number of devices and determining a number of subgroups because it would have an efficient communications system that improves and reduces the traffic volume by dividing group into smaller group or subgroup and using multicast method to particular subgroup.

17. As to claim 4, **Yuasa** teaches the invention substantially as claimed, including an article comprising a machine-accessible medium to provide machine readable instructions that, when executed, cause one or more electronic systems to:

divide the target devices into subsets of target devices, wherein a subset to which a particular device belongs is determined based on an identifier of the device and the number of subsets of target devices (abstract, figure 1, col. 8 lines 40-col. 10 lines 67, col. 17 lines 20-col. 18 lines 56, col. 45 lines 59-col. 48 lines 10).

However, **Yuasa** does not explicitly teach the features of broadcasting a discovery request to network devices; estimating a number of network devices from the responses received from the network devices; sending a second message; limiting subsets of target devices responsive to the second request including the number of subsets to which the target devices are divided and a subset index value; and varying a timing with which the second request is communicated to the subset of target devices.

Iwamura teaches broadcast a discovery request to network devices (figure 2, col. 13 lines 54-col. 15 lines 60);

estimate a number of network devices from the responses received from the network devices (figures 1, 4, 7, 67, step 332, col. 1 lines 37-col. 2 lines 11, col. 13 lines 54-col. 15 lines 15, col. 16 lines 63-col. 17 lines 29, col. 25 lines 6-50, col. 38, line 62-col. 39, line 42 –*the comparator section 14 counts the number of devices*);

send a second message (figure 7, col. 1 lines 37-col. 2 lines 11); limit subsets of target devices responsive to the second request including the number of subsets to

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which the target devices are divided and a subset index value (col. 13, line 63-col. 14, line 50, col. 16, line 62-col. 17, line 67); and

vary a timing with which the second request is communicated to the subset of target devices (col. 16, line 7-60, col. 18, line 44-col. 20, line 33)

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of **Yuasa and Iwamura** to includes the features of broadcasting discovery message, estimating number of network devices and varying timing with which the request is communicated to the subset of devices because it would provide the efficient system to reduce/eliminate the unnecessary retransmitted message and an efficient protocol execution is made possible (see Iwamura col. 16, lines 33-42).

18. As to claim 7, **Yuasa** teaches the invention substantially as claimed, including an electronic data signal embodied in a data communications medium shared among a plurality of network devices comprising sequences of instructions that, when executed, cause one or more electronic systems to:

divide the target devices into subsets of target devices, wherein a subset to which a particular device belongs is determined based on an identifier of the device and the number of subsets of target devices (abstract, figure 1, col. 8 lines 40-col. 10 lines 67, col. 17 lines 20-col. 18 lines 56, col. 45 lines 59-col. 48 lines 10).

However, **Yuasa** does not explicitly teach the features of broadcasting a discovery request to network devices; estimating a number of network devices from the

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responses received from the network devices; sending a second message; limiting subsets of target devices responsive to the second request including the number of subsets to which the target devices are divided and a subset index value; and varying a timing with which the second request is communicated to the subset of target devices.

Iwamura teaches broadcast a discovery request to network devices (figure 2, col. 13 lines 54-col. 15 lines 60);

estimate a number of network devices from the responses received from the network devices (figures 1, 4, 7, 67, step 332, col. 1 lines 37-col. 2 lines 11, col. 13 lines 54-col. 15 lines 15, col. 16 lines 63-col. 17 lines 29, col. 25 lines 6-50, col. 38, line 62-col. 39, line 42 –*the comparator section 14 counts the number of devices*);

send a second message (figure 7, col. 1 lines 37-col. 2 lines 11); limit subsets of target devices responsive to the second request including the number of subsets to which the target devices are divided and a subset index value (col. 13, line 63-col. 14, line 50, col. 16, line 62-col. 17, line 67); and

vary a timing with which the second request is communicated to the subset of target devices (col. 16, line 7-60, col. 18, line 44-col. 20, line 33)

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of **Yuasa and Iwamura** to includes the features of broadcasting discovery message, estimating number of network devices and varying timing with which the request is communicated to the subset of devices because it would provide the efficient system to reduce/eliminate the unnecessary retransmitted

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message and an efficient protocol execution is made possible (see Iwamura col. 16, lines 33-42).

19. As to claim 10, **Yuasa** teaches the invention substantially as claimed, including a method comprising:

dividing a set of target devices into multiple subsets of target devices, wherein the subset to which a particular device belongs is determined based on an identifier of the device (abstract, figure 1, col. 8 lines 40-col. 10 lines 67, col. 17 lines 20-col. 18 lines 56, col. 45 lines 59-col. 48 lines 10).

However, **Yuasa** does not explicitly teach the features of broadcasting a discovery request to network devices; estimating a number of network devices from the responses received from the network devices; sending a second message; limiting subsets of target devices responsive to the second request including the number of subsets to which the target devices are divided and a subset index value; and varying a timing with which the second request is communicated to the subset of target devices.

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estimating a number of network devices from the responses received from the network devices (figures 1, 4, 7, 67, step 332, col. 1 lines 37-col. 2 lines 11, col. 13 lines 54-col. 15 lines 15, col. 16 lines 63-col. 17 lines 29, col. 25 lines 6-50, col. 38, line 62-col. 39, line 42 –*the comparator section 14 counts the number of devices*);

sending a second message (figure 7, col. 1 lines 37-col. 2 lines 11); limiting subsets of target devices responsive to the second request including the number of subsets to which the target devices are divided and a subset index value (col. 13, line 63-col. 14, line 50, col. 16, line 62-col. 17, line 67); and

varying a timing with which the second request is communicated to the subset of target devices (col. 16, line 7-60, col. 18, line 44-col. 20, line 33)

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of **Yuasa and Iwamura** to includes the features of broadcasting discovery message, estimating number of network devices and varying timing with which the request is communicated to the subset of devices because it would provide the efficient system to reduce/eliminate the unnecessary retransmitted message and an efficient protocol execution is made possible (see Iwamura col. 16, lines 33-42).

20. As to claim 13, **Yuasa** teaches the invention as claimed, including an article comprising a machine-accessible medium, to provide machine-readable instructions that, when executed, cause one or more electronic system to:

dividing a set of target devices into multiple subsets of target devices, wherein the subset to which a particular device belongs is determined based on an identifier of the device (abstract, figure 1, col. 8 lines 40-col. 10 lines 67, col. 17 lines 20-col. 18 lines 56, col. 45 lines 59-col. 48 lines 10).

However, **Yuasa** does not explicitly teach the features of broadcasting a discovery request to network devices; estimating a number of network devices from the

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responses received from the network devices; sending a second message; limiting subsets of target devices responsive to the second request including the number of subsets to which the target devices are divided and a subset index value; and varying a timing with which the second request is communicated to the subset of target devices.

Iwamura teaches broadcast a discovery request to network devices (figure 2, col. 13 lines 54-col. 15 lines 60);

estimate a number of network devices from the responses received from the network devices (figures 1, 4, 7, 67, step 332, col. 1 lines 37-col. 2 lines 11, col. 13 lines 54-col. 15 lines 15, col. 16 lines 63-col. 17 lines 29, col. 25 lines 6-50, col. 38, line 62-col. 39, line 42 –*the comparator section 14 counts the number of devices*);

send a second message (figure 7, col. 1 lines 37-col. 2 lines 11); limit subsets of target devices responsive to the second request including the number of subsets to which the target devices are divided and a subset index value (col. 13, line 63-col. 14, line 50, col. 16, line 62-col. 17, line 67); and

vary a timing with which the second request is communicated to the subset of target devices (col. 16, line 7-60, col. 18, line 44-col. 20, line 33)

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of **Yuasa and Iwamura** to includes the features of broadcasting discovery message, estimating number of network devices and varying timing with which the request is communicated to the subset of devices because it would provide the efficient system to reduce/eliminate the unnecessary retransmitted

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message and an efficient protocol execution is made possible (see Iwamura col. 16, lines 33-42).

21. Claim 16 has similar limitations as claim 13; therefore, they are rejected under the same rationale.

22. Claims 5-6, 8-9, 11-12, 14-15, and 17-18 have similar limitations as claims 2-3; therefore, they are rejected under the same rationale.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see PTO-892).

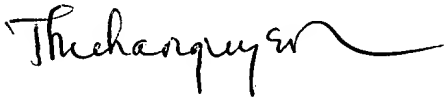
24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Ha Nguyen, whose telephone number is (571) 272-3989. The examiner can normally be reached Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Najjar Saleh, can be reached at (571) 272-4006.

The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Thu Ha Nguyen', with a long, sweeping horizontal flourish extending to the right.

Thu Ha Nguyen

May 23, 2006